

We claim:

1. A probe device for testing integrated circuits, comprising:
a bridging element;
a plurality of contact arms, each having a first end and a second end,
where the second end of each connects to the bridging element and the first end of each is configured to contact a pad of an integrated circuit and wherein the arms are configured to scrub the surface of the pad as contact between the probe and the pad is made.
2. The probe of claim 1 wherein a relative movement between the bridging element of the probe device and the contact pad of the integrated circuit is substantially perpendicular to a plane of the contact pad.
3. The probe of claim 1 wherein a plurality of the arms have an outward taper.
4. The probe of claim 1 wherein a plurality of the arms have an inward taper.
5. The probe of claim 1 additionally wherein the second end of each arm comprises a compliant member.
6. The probe of claim in a direction 5 wherein the compliance is provided in a direction parallel to a direction of relative movement between the pad and the bridging element.
7. The probe of claim 1 additionally wherein the bridging element comprises a compliant member.
8. The probe of claim 7 wherein the compliance is provided in a direction parallel to a direction of relative movement between the pad and the bridging element.

9. The probe of claim 7 wherein the compliant member is located adjacent the plurality of arms.
10. The probe of claim 7 wherein the compliant member is located away from a location where the second end of the arms contact the bridging element.
11. The probe of claim 1 additionally comprising at least one pushing element that causes the arms to separate as the probe is mated to a pad.
12. The probe of claim 11 wherein the pushing element operates as a result of a contact between the probe and the pad as the pad and probe are brought into contact.
13. The probe of claim 11 wherein the pushing element may be controlled to operate independently of a movement of a contacted probe and pad.
14. The probe of claim 1 additionally comprising at least one pulling element that causes the arms to come together as the probe is mated to a pad.
15. The probe of claim 1 formed from a plurality of adhered layers.
16. The probe of claim 7 wherein the compliant member is formed from a plurality of adhered layers of material.
17. A probe device for testing integrated circuits, comprising:
 - a bridging element;
 - a plurality of contact arms, each having a first end and a second end, where the second end of each connects to the bridging element and the first end of each is configured to contact a pad of an integrated circuit and wherein at least one of the arms or the bridging element is configured to provide compliance between the probe and the pad as contact is made.

18. The probe of claim 17 wherein a relative movement between the bridging element of the probe device and the contact pad of the integrated circuit is substantially perpendicular to a plane of the contact pad.

19. The probe of claim 17 wherein a plurality of the arms have an outward taper.

20. The probe of claim 17 wherein a plurality of the arms have an inward taper.

21. The probe of claim 17 additionally wherein the second end of each arm comprises a compliant member.

22. The probe of claim in a direction 21 wherein the compliance is provided in a direction parallel to a direction of relative movement between the pad and the bridging element.

23. The probe of claim 17 additionally wherein the bridging element comprises a compliant member.

24. The probe of claim 23 wherein the compliance is provided in a direction parallel to a direction of relative movement between the pad and the bridging element.

25. The probe of claim 23 wherein the compliant member is located adjacent the plurality of arms.

26. The probe of claim 23 wherein the compliant member is located away from a location where the second end of the arms contact the bridging element.

27. The probe of claim 17 additionally comprising at least one pushing element that causes the arms to separate as the probe is mated to a pad.
28. The probe of claim 27 wherein the pushing element operates as a result of a contact between the probe and the pad as the pad and probe are brought into contact.
29. The probe of claim 17 wherein the pushing element may be controlled to operate independently of a movement of a contacted probe and pad.
30. The probe of claim 17 additionally comprising at least one pulling element that causes the arms to come together as the probe is mated to a pad.
31. The probe of claim 17 formed from a plurality of adhered layers.
32. A probe device for testing integrated circuits, comprising:
a compliant structure;
a bridging element adhered to a compliant structure;
a plurality of contact arms, each having a first end and a second end,
where the second end of each connects to the bridging element and the first end of each is configured to contact a pad of an integrated circuit and wherein at least one of the arms or the bridging element is configured to provide compliance between the probe and the pad as contact is made.